1: Métraux E-4 (no date) 1946 SM3 Caingang SM3

clay, then crush and sift them. The composition of the clay used by other groups is unknown. The potter first models the base of the pot by hand, then builds up the walls by adding successive coils, smoothing the sides with her fingers or with pieces of wood or shell, a corn cob, a stone, or a metal spoon. To keep the clay soft, she sprinkles it with water or saliva. The following day the pot is again smoothed, then left to dry in the shade and later in the sun. When thoroughly dry, the pot is covered with branches and fired in the open until red. Later, water mixed with ground maize is sprinkled on the pot "in order that it may be unbreakable." Cracks are filled with wax while the pot is still hot. The firing, however, is always imperfect; sherds of the heaviest *Caingang* pots reveal a thick layer of unfired clay in the middle. The presence of a foreigner during firing endangers the process, and may cause the pot to crack beyond repair.

The *Caingang* of Misiones make their pots characteristically black by exposing them to smoke in a basket before they are fired.

Caingang ware has a conical base so that it can be set into the sand (fig. 58, *e*, *f*). The *Caingang-Coroado* make large beer jars, strikingly like *Guarani* jugs and funeral urns, with a conical body surmounted by a narrow edge. Besides large pots, the *Caingang* also manufacture flat roasting pans and conical drinking cups with thin walls.

Fire.—The *Caingang* fire drill consists of a stick of hard wood inserted into an arrow shaft and twirled between the palms of the hand. The hearth is a piece of soft wood. Dry palm shoots serve as tinder. According to a single authority, the *Caingang* also produce fire by sawing one piece of wood with another, a procedure observed by Rengger among the *Caingué*, but otherwise not reported for South America. The fire is activated with a fan. To avoid having to make fire, the natives carry a glowing brand in a pot or in a section of bamboo coated with clay.

Weapons: *Bows and arrows.*—Bows are made of páo d'arco (*Tabebuia impetiginosa*) or of black ipé (*Tabebuia chrysantha*). Before the *Caingang* acquired iron, they wrought the bow stave into shape by rubbing it with sandstone and flint flakes, and smoothed it with the rough leaves of umbauba (*Cecropia* sp.). Finally, the stave was warmed against a fire and smeared with grease. At each end a plaited bulge or, rarely, two right-angled notches prevented the caraguatá or embira string from slipping. The stave was wrapped with strips of cipo embé (*Philodendron imbe*) (fig. 59, *g*), which at both ends formed a bulge to prevent the string from slipping. Some *Caingang* bows were 9 feet long, but they generally averaged from 7 to 8 feet.

The arrow shaft, according to the locality, is made of taquara da frecha (*Gynerium sagittatum*), or of palo alecrim, a white wood that

2: Henry E-5 (1932-1934) 1941
SM3 Caingang SM3
Aweikoma

PLATE II

a, b Lip plugs *c* Lip piercing knife *d* Tooth extractor
e Stone pestle *f,g* Unknown *h* Base for fire-drill *i* fire stick

[P. 140 (8)]

2: Henry E-5 (1932-1934) 1941
SM3 Caingang SM3
Aweikoma

times used and that this makes the beer particularly *thó*. Sometimes a little 273
medicine is added for the sake of general good health. From time to time the beer is stirred with a long rod of bamboo, and the scum that rises is scooped off with the hands.

Preparation of Food

The women make pine-nut soup. A woman chews the raw pine nuts to 252
a pulp, mixes them with water, and boils them. Sometimes they are pounded. The usual way of eating pine nuts is roasted in the shell in the coals.

Meats are sometimes boiled, and nowadays the broth is mixed with manioc meal and eaten. Most meat is roasted. This may be done in two ways. A scaffold of green branches is erected, a fire built under it, and the meat placed on it and roasted. Or a shallow pit is dug, a fire built in it, and green branches laid over it, the meat is then laid on the branches with leaves on top of it, and the whole covered with earth and left there for several hours. When the meat is taken off the branches it is juicy and delicious. The pit method is the best way to roast meat. In roasting meat in this way at least two people generally cooperate. One digs the hole while the other gets wood and leaves.

Small animals are spitted and broiled. Fish are broiled.

Palm shoots are boiled or eaten raw.

Kĕmé is made from the pith of the trunk of a certain palm. Leaves are laid on the ground and a cloth placed on top of them. The trunk is chopped vertically into strips; these are placed on a log and pounded with a stick. The mass is sifted in a basket, and the siftings are stuffed into a bamboo tube and roasted in the coals for five or ten minutes. The mass in the tube is then taken out, made into balls or cakes, and roasted in the coals. It tastes much like wet sawdust, and the Indians nowadays do not eat it even when they have the chance. Formerly it seems to have been fairly important in their diet. They mixed it with soup just as they do now with manioc meal. The Kaingáng say that in ancient times they used corn in the same way.

The Kaingáng used also to make a soup of the pollen of the pine tree. *Tai* fruit and wild *mamão* are roasted in the coals. Sometimes *tai* is pounded in a mortar and eaten.

FIRE

When the Kaingáng move camp the woman takes an ember[9] from the 372
last fire. Men carry no fire; so if they need it to roast nuts when they are hungry or to make fire to drive away wasps or "dangerous bees" they

[9] Any wood will do.

2: Henry E-5 (1932-1934) 1941
SM3 Caingang SM3
Aweikoma

make it with a fire drill. They cut a piece of dry white canela about an inch thick, two inches wide, and two feet long and make a hole in it about half an inch deep, with a shallow groove on each side—Heaven knows what for[10]—extending over the edges of the stick. They also cut a smaller branch about a quarter of an inch in diameter and a foot and a half long; this is the drill. The Indian spits on his hands, places the drill in the hole, and begins to whirl the stick between his two palms, moving them up and down as he does so. After ten minutes he has no fire; so he calls another Indian and they alternate in whirling the drill. In five minutes more a wisp of smoke from the hole raises their hopes. They remove the drill and look—no spark. For five minutes more they drill, and then the spark comes. Sometimes the spark is on the end of the drill; sometimes it is on the side of the hole. Now the spark is placed on some dry palm leaves, and they blow on it until the leaves burst into flame.

I once saw two men attempt to make a fire with a three-foot base on which they could put their feet and a drill three feet long made of a long bamboo tube with a canela tip inserted at the bottom. They worked for twelve minutes without result. When a third man helped them they succeeded in obtaining a spark.

No sexual symbolism attaches to the fire-making apparatus.

Houses

Houses are built under pressure. It is theoretically woman's work, but in the excitement of sudden rain men and women cooperate. The woman goes for leaves for covering while the man cuts and sinks the heavy uprights and lighter boughs which are sharpened to a point at one end. He digs no hole for them but sinks them into the ground by raising them and throwing them repeatedly, with unerring eye, into the same hole, making it deeper with each throw. Sometimes two convenient trees are used as uprights. If the Indian should perchance decide to build the house long before the storm actually breaks and finds the ground is hard and dry he moistens the soil with whatever is at hand, even tapir soup.

When the uprights are in place the transverse is bound on about eight[11] feet above the ground. Now light boughs are sunk into the ground about nine feet in back of the uprights, *sloping away from them,* making an angle about 60° with the ground so that when they are bent over they will not break out. They are lifted and thrown into the ground just as the uprights were. The boughs are bent over and lashed to the transverse with

[10] What sparks were obtained were always in the hole itself or on the tip of the drill.

[11] Naturally if a house is built entirely by a woman it will be lower than if it is built by a man. Women may bind sloping posts against the uprights so that they can stand on them and reach high. The height of the house is much more variable than the width.

411 Another weapon is the kõuan, a club 1.50 centimeters [sic] in length. Its cylindrical handle extends into a broadening lozenge [prism] with very sharp edges.

These clubs as well as the spears (lõng-lõma, kõlẽdma) are ornamented with burned-in linear figures, and the latter are also adorned where the blade joins the shaft with an attractive strip plaited in two colors.

712 When fearing a possible attack, they fortify the vicinity of their camp with pitfalls which may be as deep as two meters and even more. The walls are covered with sharpened spikes, and in the center [124] they place a spear. Whoever falls into one of these holds invariably dies a horrible death.

They conceal these pits so skilfully, covering them with light sticks and foliage, that without previous knowledge even the Indians fail to discern them.

A lamentable accident occurred at the Post shortly after peaceful contact began. An Indian who had reached the camp at night from another location fell into one of the pits and died a few hours later from the horrible wounds lacerating his body.

In addition to these pits, the camps are always protected with barricades [trincheiras] built in the most propitious spots. When danger threatens, these barriers are manned day and night by experienced warriors.

198 They possess an efficient whistle language made up of various bird calls, through which they communicate remarkably well by exchanging signals and warnings when they keep watch around the camps, at night or in the daytime, whenever the need arises.

372 They make fire in the usual manner of Brazilian tribes--by rubbing two sticks, one of them hard wood and the other softer.

They proceed by steadying with their toes a piece of soft wood with a notch in the center, where they rest the tip of a rod made of very hard wood.

The rotating motion imparted to this stick with the palm of the hands produces a very fine dust which eventually catches fire. When a tenuous spiral of blue smoke begins to wind around the stick, the rotation is further accelerated and the dust begins to burn. Then minute fragments of dry grated wood are carefully piled together, and repeated blowing produces a small flame which is gradually enlarged.

312 This process, which involves a tremendous expenditure of time and careful labor, is only used as a last resort.

The Indians exercise the greatest care to keep their fires burning, and watch them constantly so they will not die out.

When they are on the move, a woman or child always accompanies them with the task of watching over the fire, which is carried in the form of lighted sticks.

325 Before the time of peaceful contact, the Botocudo had secured iron in the course of their raids. In view of its advantages over chipped stone, this material has become precious to them and indispensable to the manufacture of their weapons. They do not work it by heating the metal but by beating it cold with hard rounded stones which they gather in shallow river waters. It is easy to imagine how much patience and perseverance are needed to shape a piece of iron into an object of completely different form and size. Suffice it to say that the making of a spearhead demands more than three months of daily labor.

They also use iron to make small knives, graters, and various other small implements. [125]

283 As already mentioned, their aprons are woven with a kind of wild nettle. This is done as follows. The women pound the plants with small clubs on every side until all the leaves and larger thorns are removed. When this is done, they make small cuts in the stem, just above the roots, and peel off the outer layer in longitudinal strips.

These strips are joined into a large bundle and placed in the water for a certain period of time. When retrieved, they are pounded hard between two sticks until only the fibers remain, free from the ligneous parts. This procedure is repeated over and again; then the fiber is dried and spun by hand upon the naked thigh, and the
286 yarn coiled into a ball. They build a very primitive loom which consists of two sticks stuck obliquely into the ground, with two other sticks fastened upon them horizontally. Squatting before this loom, the women plait in various ways, with comparative ease, the threads they have secured to the frame.

285 Their large loading baskets, kan-nha; the smaller waxed
415 baskets used to carry water; and the little ones, also waxed, which serve various purposes, are all plaited of taquara mansa [a bamboo,